## ABSTRACT

A strategy for semiautomatic sequencing of argentinated (silver-containing) oligopeptides is described. The method of sequencing described is based on a search algorithm that identifies a triplet peak relationship in a product ion spectrum of the  $[M+Ag]^+$  ion of an oligopeptide. The ions that constitute a triplet are  $[b_n+OH+Ag]^+$ ,  $[b_n-H+Ag]^+$ , and  $[a_n-H+Ag]^+$ , which are separated by 18 and 28 m/z units, respectively. The difference in the m/z values of adjacent triplets identifies the residue that is "cleaved". Observation of the  $[y_n+H+Ag]^+$  ion containing the cleaved residue confirms the assignment.

CERTIFICATE UNDER 37 CFR 1.10

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'Express Mail' mailing label number: EL815537543US Date of Deposit: March 13, 2001

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